

AMENDMENTS TO THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

CLAIMS:

1. – 23. (Canceled)

24. (Previously Presented) A DNA fragment for causing a cell to produce an arbitrary protein, said DNA fragment comprising:

cDNA of a virus vector that has been constructed by inserting a coding gene of an arbitrary protein into an RNA virus; and

a ribozyme sequence ligated to the 3' end of the virus vector cDNA.

25. (Previously Presented) A DNA fragment as set forth in claim 24, wherein the virus vector originates in a virus that includes single strand (+) RNA.

26. (Currently Amended) A DNA fragment as set forth in claim 24-~~or 25~~, wherein the virus vector originates in a plant virus.

27. (Previously Presented) A DNA fragment as set forth in claim 26, wherein the virus vector originates in a plant virus that has a suppressor against a silencing reaction of plants.

28. (Previously Presented) A DNA fragment as set forth in claim 27, wherein the virus vector originates in a tobamovirus.

29. (Previously Presented) A DNA fragment as set forth in claim 28, wherein the virus vector comprises one of tobacco mosaic virus vector and tomato mosaic virus vector.

30. (Currently Amended) A DNA fragment as set forth in ~~any one of claims 24 through 29~~claim 24, wherein the ribozyme sequence comprises one of a ribozyme sequence of hepatitis delta virus and a ribozyme sequence of satellite tobacco ringspot virus.

31. (Currently Amended) A DNA fragment as set forth in claim 24~~any one of claims 24 through 30~~, wherein the coding gene of an arbitrary protein is inserted into a downstream side of a promoter of a gene that encodes a coat protein of the virus.

32. (Currently Amended) A DNA fragment as set forth in claim 24~~any one of claims 24 through 31~~, wherein the cDNA of the virus vector that has incorporated the coding gene of an arbitrary protein, and the ribozyme sequence ligated to the 3' end of the virus vector cDNA are transcribed under control of an inducible promoter that is located upstream of the virus vector cDNA and the ribozyme sequence.

33. (Previously Presented) A DNA fragment as set forth in claim 32, comprising a gene that encodes a transcription factor for controlling transcription induced by the inducible promoter.

34. (Previously Presented) A DNA fragment as set forth in claim 33, wherein the transcription is controlled by steroid hormone or estrogen.

35. (Previously Presented) A DNA fragment as set forth in claim 34, wherein the transcription is controlled by (i) GVG, which is a transcription factor whose transcription inducing ability is activated by steroid hormone, and (ii) 6XUASgal4, which is a promoter induced by activated GVG.

36. (Previously Presented) A DNA fragment as set forth in claim 34, wherein the transcription is controlled by (i) XVE, which is a transcription factor whose transcription inducing ability is activated by estrogen, and (ii) O_{LexA}-46, which is a promoter induced by activated XVE.

37. (Currently Amended) A vector, which includes the DNA fragment of claim 24~~any one of claims 24 through 36~~, and has an ability to be incorporated in a cell genome.

38. (Cancelled).

39. (Currently Amended) A transforming kit, which comprises at least one of the DNA fragment of claim 24~~any one of claims 24 through 36~~, and/or the a vector including the DNA fragment of claim 24~~of claims 37 or 38~~.

40. (Currently Amended) A transformant, which is obtained with use of at least one of (i) the DNA fragment of any one of claims 24 through 36claim 24, (ii) the a vector including the DNA fragment of claim 24~~of claim 37 or 38~~, and (iii) the a transforming kit including a vector including the DNA fragment of claim 24~~of claim 39~~.

41. - 45. (Cancelled)

46. (Previously Presented) A process for producing a transformant for protein production, comprising:

a first transforming step of transfecting a host cell with a transcription factor-expressing DNA fragment in which a coding gene of a transcription factor is ligated to a promoter for expressing the transcription factor;

a screening step of screening transformants, obtained in the first transforming step, for an individual expressing the transcription factor; and

a second transforming step of transfecting the transformant, obtained in the screening step, with a protein-expressing DNA fragment in which cDNA of a virus vector that has been constructed by inserting a coding gene of an arbitrary protein into an RNA virus is ligated to an inducible promoter which is induced by the transcription factor.

47. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 46, wherein the transcription factor has a property of being activated by hormone.

48. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 47, wherein the hormone comprises estrogen or steroid hormone.

49. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 48, wherein LexA-VP16-hER is used as the transcription factor having a property of being activated by estrogen, and wherein O_{LexA}-46 is used as the inducible promoter.

50. (Currently Amended) A process for producing a transformant for protein production as set forth in ~~any one of claims 46 through 49~~claim 46, wherein the virus vector originates in a virus that includes single strand (+) RNA.

51. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 50, wherein the virus vector originates in a plant virus.

52. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 51, wherein the virus vector originates in a plant virus that has a suppressor against a silencing reaction of plants.

53. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 52, wherein the virus vector originates in a tobamovirus.

54. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 53, wherein the virus vector comprises one of tomato mosaic virus and tobacco mosaic virus.

55. (Currently Amended) A process for producing a transformant for protein production as set forth in claim 46~~any one of claims 46 through 54~~, wherein a ribozyme sequence is ligated to the 3' end of the virus vector cDNA.

56. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 55, wherein the ribozyme sequence is one of (i) a ribozyme sequence of hepatitis delta virus, and (ii) a ribozyme sequence of satellite tobacco ringspot virus.

57. (Currently Amended) A process for producing a transformant for protein production as set forth in claim 46~~any one of claims 46 through 56~~, wherein the coding gene of an arbitrary protein is substituted with a gene that encodes a coat protein of the virus.

58. (Currently Amended) A process for producing a transformant for protein production as set forth in claim 46~~any one of claims 46 through 57~~, wherein the transcription factor-expressing DNA fragment and the protein-expressing DNA fragment are transferred by an Agrobacterium method.

59. (Currently Amended) A process for producing a transformant for protein production as set forth in claim 46~~any one of claims 46 through 58~~, wherein the host cell and the transformant comprise plants or plant culture cells.

60. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 59, wherein the plant culture cells comprise tobacco cells.

61. (Previously Presented) A process for producing a transformant for protein production as set forth in claim 60, wherein the tobacco cells comprise tobacco BY-2 cells.

62. (Currently Amended) A transformant for protein production, which is produced by the process for producing a transformant for protein production as set forth in claim 46~~any one of claims 46 through 61~~.

63. (Previously Presented) A protein producing process, which uses the transformant for protein production as set forth in claim 62.

64. (Currently Amended) A producing kit for performing the process for producing a transformant for protein production as set forth in claim 46~~any one of claims 46 through 63~~.